PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

To:

Commissioner
US Department of Commerce
United States Patent and Trademark Office, PCT
2011 South Clark Place Room CP2/5C24
Arlington, VA 22202
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 30 April 2001 (30.04.01)	
International application No. PCT/US00/19103	**Applicant's or agent's file reference** RCA89656
International filing date (day/month/year) 13 July 2000 (13.07.00)	**Priority date** (day/month/year) 16 July 1999 (16.07.99)
Applicant MAYER, Matthew, Thomas	

1. The designated Office is hereby notified of its election made:

[X] in the demand filed with the International Preliminary Examining Authority on:

14 February 2001 (14.02.01)

[ ] in a notice effecting later election filed with the International Bureau on:

2. The election [X] was

[ ] was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Céline Faust Telephone No.: (41-22) 338.83.38

PATENT COOPERATION TREATY

PCT

REC'D 19 OCT 2001
WIPO PC

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
RCA89656		
International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US00/19103	13/07/2000	16/07/1999
International Patent Classification (IPC) or national classification and IPC H04N5/44		
Applicant THOMSON LICENSING S.A. et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 7 sheets, including this cover sheet.

   ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the report
   - II ☐ Priority
   - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement
   - VI ☐ Certain documents cited
   - VII ☒ Certain defects in the international application
   - VIII ☒ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
14/02/2001	17.10.2001
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Schneiderlin, J Telephone No. +49 89 2399 7400

Form PCT/IPEA/409 (cover sheet) (January 1994)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/US00/19103

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:
Description, pages:

1-6 as originally filed

Claims, No.:

1-6 as originally filed

Drawings, sheets:

1/2,2/2 as received on 24/08/2000

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-6
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-6
Industrial applicability (IA)	Yes:	Claims	1-6
	No:	Claims	

2. Citations and explanations
see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

Re Item V

Reference is made to the following document:

D1:EP-A-0 903 937 (ALPS ELECTRONIC CO LTD) 24 March 1999 (1999-03-24)

It cannot be contested that the television receiving system of D1, which is considered to represent the most relevant state of the art, comprises (see fig. 1):

- a tuner 3-5 for receiving the digital signal associated with a broadcast channel selected from a plurality of channel locations in a frequency band;
- a frequency conversion stage 6-9 for converting in frequency the digital signal to an intermediate frequency signal to be output at terminal 1d; and
- a filter 21 for attenuating adjacent signals, coupled to the frequency conversion stage, this filter having a center frequency equal to the intermediate frequency;

The operational feature that

the center frequency of the intermediate frequency signal is capable of being switched to a nominal frequency or to a second frequency being different from the nominal frequency and

the feature of effect that

the filter, in response to the center frequency of the intermediate frequency signal being switched to the second frequency, further attenuates a lower adjacent analog signal

are only a matter of controlling the elements of D1. It has been common for a user trying to improve the quality of the picture received on his analogue TV to press a "fine tune" bottom on his remote control. When the "fine tune +" bottom is pressed once, the frequency of the local oscillator is increased by a small step (usually a few KHz) and thereby interference caused by another television signal is reduced by further attenuation of this television signal by the filter. In the case of analogue satellite television this also reduces interferences caused by an **adjacent** analog television signal. Transferring the same principle to digital TV cannot be inventive. So the subject matter of claim 1 is therefore equivalent to the procedure performed by anybody tuning a TV receiver. However, mere automatisation of functions previously performed by users corresponds to the general trend in technology and cannot as such be considered inventive.

Thus, the subject-matter of **claim 1 does not involve an inventive step** and does not satisfy the criterion set forth in Article 33(3) PCT.

Document D1 discloses a method of receiving a digital television signal susceptible to interference caused by a lower adjacent analog television signal (see col. 1, line 50) comprising the steps of:

- tuning a radio frequency (see col. 3, ll. 14-18 and ll. 27-29)
- setting the frequency of a local oscillator 7
- heterodyning the RF signal with the local oscillator signal to generate an intermediate frequency signal (see col. 3, ll. 19-22)
- filtering the resulting IF signal to attenuate the adjacent analog signal (see col. 3, ll. 47-50).

Claim 5 differs from the matter of D1 in that the intermediate frequency signal has "a frequency offset from nominal" generated by "offsetting the frequency of the LO".
The effect resulting from this difference is that an interference caused by another television signal is reduced. As explained on the previous page this is equivalent to the procedure performed by anybody tuning a TV receiver.
The subject-matter of **claim 5 is therefore not inventive** (Article 33(3) PCT).

Dependent claims 2-4 and 6 do not appear to contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step since they are only implementation details that would be obvious to the person skilled in the art.

Re Item VII

1. A document reflecting the prior art described on pages 1-2, is not identified in the description (Rule 5.1(a)(ii) PCT).

2. The summary of the invention is not in conformity with the claims as required by Rule 5.1(a)(iii) PCT.

3. Independent claims 1 and 5 are not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art (D1) being placed in the preamble (Rule 6.3(b)(i) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).

4. The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).

Re Item VIII

1. Support Article 6 PCT

Claim 1 is not supported by the description as its scope is broader than justified by the description and drawings. The reasons therefor are the following:

a) Concerning the operational feature that

the center frequency of the intermediate frequency signal is capable of being switched to a nominal frequency or to a second frequency being different from the nominal frequency,

the fact that the second frequency is different from the nominal frequency includes the case where those frequencies are very different (for example 300MHz and 500MHz) - this was not disclosed.

b) Concerning the feature of effect that

the filter, in response to the center frequency of the intermediate frequency signal being switched to the second frequency, further attenuates a lower adjacent analog signal,

it includes the case where the spectral response of the filter changes - this was not disclosed.

Furthermore, those features have been drafted in so speculative a manner that there cannot be deduced from them any technical effect that contributes to the general idea of the application (i.e. further attenuating a lower adjacent analog signal when there is a risk of interference). In fact they broadly define the filter and the switching in terms of their function (i.e. **further** attenuating a lower adjacent analog signal). However, the description and drawings (see fig. 2 and pages 4-6) convey the impression that this function can only be carried out in a particular way, namely by **shifting slightly upwards** the frequency of the intermediate frequency signal without modifying the center frequency of the filter, and no alternative means are envisaged.

Hence, **claim 1 is not supported by the description** as required by Article 6 PCT .

2. Clarity Article 6 PCT

The awkward wording of the last 3 lines of claim 1 gives the impression that the filter performs an action (changes its characteristic) in response to the switching. This is misleading and should therefore be corrected.

3. Description and drawings

In figure 1, the arrows near the local oscillator 116 are in the wrong direction compared to the originally filed drawings.

Figure 2B suggests that the slope of the attenuation by the filter is decreased when the LO is switched - this is in contradiction with the message of the description.

PATENT COOPERATION TREATY

EXPRESS EL902327722 US

From the INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

TRIPOLI,Joseph S.
THOMSON MULTIMEDIA LICENSING INC.
P.O. Box 5312
2 Independence Way
Princeton, New Jersey 08540
ETATS-UNIS D'AMERIQUE

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PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Rule 71.1)

Date of mailing *(day/month/year)*	17.10.2001
Applicant's or agent's file reference: RCA89656	**IMPORTANT NOTIFICATION**

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US00/19103	13/07/2000	16/07/1999

Applicant: THOMSON LICENSING S.A. et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.

2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.

3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Event	DA Final country selection To Davida
Deadline	16 NOV 2001
Entered	DPF 11/7/01

Name and mailing address of the IPEA/	Authorized officer
European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Schalinatus, D Tel.+49 89 2399-8242

Form PCT/IPEA/416 (July 1992)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference	**FOR FURTHER ACTION**	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
RCA89656		
International application No.	International filing date *(day/month/year)*	(Earliest) Priority Date *(day/month/year)*
PCT/US 00/ 19103	13/07/2000	16/07/1999
Applicant		
THOMSON LICENSING S.A.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

[X] It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

   a. With regard to the **language,** the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

   [ ] the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

   b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

   [ ] contained in the international application in written form.

   [ ] filed together with the international application in computer readable form.

   [ ] furnished subsequently to this Authority in written form.

   [ ] furnished subsequently to this Authority in computer readble form.

   [ ] the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

   [ ] the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. [ ] **Certain claims were found unsearchable** (See Box I).

3. [ ] **Unity of invention is lacking** (see Box II).

4. With regard to the **title,**

   [X] the text is approved as submitted by the applicant.

   [ ] the text has been established by this Authority to read as follows:

5. With regard to the **abstract,**

   [X] the text is approved as submitted by the applicant.

   [ ] the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No. 1

   [X] as suggested by the applicant.

   [ ] because the applicant failed to suggest a figure.

   [ ] because this figure better characterizes the invention.

   [ ] None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No
P[redacted]S 00/19103

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04N5/44 H04N5/21

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
WPI Data, EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 903 937 A (ALPS ELECTRONIC CO LTD) 24 March 1999 (1999-03-24) column 1, line 25 -column 2, line 26	1,5
P,A	US 5 940 143 A (IGARASHI Y. ET AL) 17 August 1999 (1999-08-17) the whole document	1,5
A	& JP 09 163265 A (HITACHI LTD.) 20 June 1997 (1997-06-20)	
A	US 5 805 241 A (LIMBERG A.) 8 September 1998 (1998-09-08) column 5, line 32 -column 6, line 22	1,5
A	WO 99 05796 A (KONINKLIJKE PHILIPS ELECTRONICS N.V.) 4 February 1999 (1999-02-04) page 6, line 18 -page 8, line 14	1,5

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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
2 November 2000	10/11/2000

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Verschelden, J

2

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 00/19103

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
A	DE 36 16 987 A (HITACHI LTD) 4 December 1986 (1986-12-04) page 7, line 37 -page 8, column 19	1,5

2

Form PCT/ISA/210 (continuation of second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PC[redacted]S 00/19103

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 903937 A	24-03-1999	JP 11098037 A	09-04-1999
US 5940143 A	17-08-1999	JP 9163265 A	20-06-1997
US 5805241 A	08-09-1998	NONE	
WO 9905796 A	04-02-1999	EP 0951756 A	27-10-1999
		EP 0934652 A	11-08-1999
		WO 9905861 A	04-02-1999
DE 3616987 A	04-12-1986	JP 61265929 A	25-11-1986
		JP 62101130 A	11-05-1987

INTERNATIONAL SEARCH REPORT

Internal Application No
PCT/US 00/19103

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04N5/44 H04N5/21

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
WPI Data, EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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P,A	US 5 940 143 A (IGARASHI Y. ET AL) 17 August 1999 (1999-08-17) the whole document	1,5
A	& JP 09 163265 A (HITACHI LTD.) 20 June 1997 (1997-06-20)	
A	US 5 805 241 A (LIMBERG A.) 8 September 1998 (1998-09-08) column 5, line 32 -column 6, line 22	1,5
A	WO 99 05796 A (KONINKLIJKE PHILIPS ELECTRONICS N.V.) 4 February 1999 (1999-02-04) page 6, line 18 -page 8, line 14	1,5

-/--

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
2 November 2000	10/11/2000

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Verschelden, J

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

Internal application No
PCT/US 00/19103

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 36 16 987 A (HITACHI LTD) 4 December 1986 (1986-12-04) page 7, line 37 -page 8, column 19	1,5

Form PCT/ISA/210 (continuation of second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

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Internat...al ...tion No
PCT/US 00/19103

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 903937 A	24-03-1999	JP 11098037 A	09-04-1999
US 5940143 A	17-08-1999	JP 9163265 A	20-06-1997
US 5805241 A	08-09-1998	NONE	
WO 9905796 A	04-02-1999	EP 0951756 A	27-10-1999
		EP 0934652 A	11-08-1999
		WO 9905861 A	04-02-1999
DE 3616987 A	04-12-1986	JP 61265929 A	25-11-1986
		JP 62101130 A	11-05-1987